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NEW TURBINES, ADVANCES IN MECHANIZATION MARK HEAVY-MACHINE BUILDING

/Numbers in parentheses refer to list of sources appended./

Turbines, Allied Equipment

The Metal Plant imeni Stalin, Leningrad, has recently completed two hydroturbines, and has met the year norm for hydroturbine production (2). One of them, finished 2 months ahead of schedule, is destined for the Dnepr GES imeni Lenin (1). Another Leningrad turbine production center, the Ne ..iy Plant imeni Lenin, is running final tests on two large boosters for mi d-gas blowing units; they are to be used in rail-structural shops of metallurgical enterprises. A third such booster is being assembled at the plant. The machining of parts, assembly, and testing of the two units took only $1\frac{1}{2}$ months instead of the planned $2\frac{1}{2}$ months. A turboblower and a 12,000-kilowatt turbine to run it have been completed recently. (3)

In Riga, the Turbine-Machinery Plant has started production of turbines for rural electric power stations and of turbine pumps for feeding high-pressure steam boilers. It is drawing up plans for a 1,600-kilowatt capacity hydroturbine and a Kaplan-type propeller turbine. (4)

Other Heavy Machinery

Production at the Riga Turbine-Machinery Plant has also begun on fin-type air preheaters for heating units in electric power stations, and on rock-loading machines (4). The "Pnevmatika" Plant, Leningrad, has completed over 200 new-type drills. Lighter and more efficient than those currently used in the mines, they are now mass-produced. (5)

The Plant imeni Kirov in Tiraspol', built on the site of the former German Pitch enterprise, has developed rapidly and now puts out petroleum engines, centrifugal pumps, pneumatic hammers, stone-cutting machines, and wine presses. (6)

The Tallin Machine-Building Plant has pledged early fulfillment of a series of orders for slate- and rock-cutting machines, with 7 November as delivery limit. Among these will be complex, special equipment destined for Kokhtla-Yarve. (7)

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Mechanization and New Equipment

Electrical methods are coming into use in several manufacturing processes. The boiler shop of the Tallin Machine-Building Plant recently put into operation a new automatic electric welding apparatus, designed by Academician Paton (7). Cutting tools at the "Pnevmatika" Plant are now being hardened by an electric-spark unit (5). There are two anode-mechanical cutting machines in the Riga Turbine-Machinery Plant: one designed for sharpening hard-alloy cutting tools, the other for sawing heavy ingots. Neither machine, however, is as yet set up for operation. The plant also has an expensive high-frequency unit intended for tempering in place of thermal methods, but it has lain idle for 1½ months. (4)

Recent improvements in the machining field are reducing the number of operations necessary and increasing productive capacity. A new attachment put into use in the "Krasnyy Metallist" Plant makes possible the machining of six washers simultaneously, and does away with complicated marking-out. With the aid of a new-type cutter, flanges are machined on a boring-and-turning lathe in one operation instead of four, while another device in the plant effects the machining of vertical cable-car axles in half the former time. (5)

The "Pnevmatika" Plant has modernized one machine tool used for turning pneumatic-drill bits, and another for machining strikers for hammer drills. Both machines are twice as productive as formerly. (5)

On the other hand, there is a shortage of hard-alloy cutters in the Riga Turbine-Machinery Plant, and centralized sharpening and grinding of cutters has not yet been set up. As a result, only three of the four milling machines and four of the eight turning lathes specified for high-speed methods under the plant plan have been converted, and even these do not always fulfill their quotas. Plant Director Leont'yev and Chief Engineer Rudenko are failing to teach and put into practice new technological methods. (4)

The Tallin Machine-Building Plant has received from Moscow powerful mechanical shears for iron cutting. (7)

In heavy operations, elimination of finishing work is the keynote at the "Svoboda" Plant, Leningrad, where a new method has been devised for producing forgings in crank presses. This has considerably reduced the amount of machining to be done on the products, has freed equipment for other work, and saved metal, heat, and electricity. At the "Krasnyy Metallist" Plant, a new complex die stamps out as many keyways in 8 hours as were formerly made in 2 weeks. (5)

However, in the foundry of the Riga Turbine-Machinery Plant, tamping of moulds is still done by hand because the plant has not made the simple parts required for connecting its pneumatic tamping machines to compressors. (4)

SOURCES

1. Vechernyaya Moskva, No 260, 1 Nov 49
2. Pravda, No 279, 6 Oct 49
3. Leningradskaya Pravda, No 258, 1 Nov 49
4. Sovetskaya Latviya, No 237, 7 Oct 49
5. Leningradskaya Pravda, No 251, 23 Oct 49
6. Sovetskaya Moldaviya, No 219, 1 Nov 49
7. Sovetskaya Estoniya, No 258, 1 Nov 49

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